



REPORTS

FROM WASHINGTON: VELIKOVSKY RIDES AGAIN

HOWARD MARGOLIS

The September 1963 issue of *The American Behavioral Scientist* devoted itself to an impassioned defense of Emanuel Velikovsky, the worlds-in-collision man, and consequently to an impassioned denunciation of scientists for arrogantly refusing the man a fair hearing. The three articles developing these accusations were published under the collective title, "The Politics of Science and Dr. Velikovsky." "While Velikovsky's ideas are not at all beyond criticism," the articles conclude, "as a cosmologist he appears in the company of Plato, Aquinas, Bruno, Descartes, Newton, and Kant. What would therefore be only the duty of the critics of science—to defend ordinary or even mistaken scholars—becomes, by accident, an occasion to defend a great savant of the age."

This is pretty heady stuff. The reasons given for the massive injustice done to Velikovsky range wide, beginning with the conventional accusation that scientists are unwilling to listen to someone without formal credentials, and ending with a bizarre suggestion that "an informal left-wing network might well have been in operation." But all this is by the way. The principal theory advanced in *Behavioral Scientist*, and also in an article in *Harper's* by Eric Larabee, is that the scientists are reacting irrationally to a challenge which they are unable to refute, but which threatens large parts of the scientific worldview built up since Newton. This is the reaction which accounts, according to the editors, for "the prolonged emotional outburst in which almost the entire scientific community of the 1950s took part, an outburst of what Soren

Kierkegaard termed 'fear and trembling.'"

How did Velikovsky free himself of the prejudices that blind the physical scientists? "When the Velikovsky affair is considered in the light of the history of science it loses its puzzling qualities. Velikovsky," we are told, "saw what other scholars were not able to see because he relied on pieces of evidence that they had chosen to neglect, namely the accumulated records of human experience. Natural scientists who scorn these records put themselves in the position of the early astronomers who held that no truly respectable scholar should resort to 'the telescope.'"

On this basis, it is unsurprising that the magazine's editor, Alfred de Grazia, a professor of government at New York University, should issue a rallying cry to his readers: "What has not been appreciated," de Grazia writes, "... is the high involvement of the social and behavioral sciences. The social sciences are the basis of Velikovsky's work. . . It is by the use of the methodology of social science and the dates of history that Velikovsky has launched his formidable assault upon the heroes and theories of the classics, astronomy, geology, and historical biology. Yet the social scientists have been generally unaware of his work and almost totally disengaged."

None of this seems to have had much impact. The magazine's readers responded favorably in letters. But the physical scientists who were the focus of the attack seem barely to have noticed the challenge. There is no indication that behavioral scientists in significant numbers are rallying to the call to defend Velikovsky. Conse-

quently, the intent of this report is not to discuss the controversy, since no perceptible controversy seems to have developed. What is of most interest here is that this attack on scientists incidentally and quite unintentionally provides an indication of the kind of confusion that must be expected when technical matters become the focus of public debate. For here we have a case in which there is none of the emotional and political passions that appear in matters like those involving fallout or fluoridation; none of the obvious economic and prestige influence that cannot be avoided on issues of where to set up a new space center or to build a new multibillion volt particle accelerator; none of the major national security issues so clearly involved in matters like the test ban or whether to build an anti-ballistic missile system; in short, we have to contend with none of the powerful factors that make it difficult to get a reasonably dispassionate public discussion of the technical side of political issues. We would expect a nice, reasonably reasonable weighing of objective evidence for and against Dr. Velikovsky. The *Behavioral Scientist* attack is not even directed particularly against those scientists who thirteen years ago felt that an appropriate response to the book was to bring pressure on its publisher to abandon the project. It is a general, unqualified attack on anyone who dismissed Velikovsky's work as plain hokum. And what makes the attack interesting, coming in a scholarly journal with a prestigious board of editorial advisors, is that Velikovsky's work, as clearly as anything can be in this world, is plain hokum.

Velikovsky's view is that around 1500 B.C. the planet Jupiter expelled the planet Venus as a comet, which then brushed past the earth, producing vast catastrophes (for example, boiling oceans) and incidentally the ten plagues of the biblical Exodus, the splitting of the Red Sea, and the pillar of cloud by day and fire by night which the Hebrews followed in the desert for the next forty years. The visit of Venus either temporarily stopped the earth's rotation or tilted it over on its axis, to produce the effect of prolonged night in the Near East. Fifty-two years later, the comet returned, according to Velikovsky, again stopping or tilting

approaches between celestial bodies a much more intense interaction must result.

22 The misfortune of science is that no person of the Establishment has condescended to argue with Velikovsky. No general theory provides for everything. But there are four detailed books to argue with.

23 Who says so? Dogmatic denial.
24 Historically, in natural and social science, it is often indeed observed, not merely conceivable, that one man is right when most others are wrong.

25 See above. Also Velikovsky offered a series of crucial tests, such as the great heat of Venus (when it was agreed that Venus' ground temperature was higher by 3° than that of the earth). It was found (1962-3) to be around 800°. Or, the hydrocarbon nature of Venus' envelope. Apparently confirmed: 1962-3 (Mariner II).

26 "Wrong in detail and still be magnificently right" This is logical nonsense. As above there is ample ground for testing his theories and they have begun to be tested. However, the historical tests are eminently in order. Agreed that, "if these do support his thesis, then the scientific community is indeed gravely at fault . . ." They do so support and the community is at fault.

27 Margolis says he dislikes impassioned language!

28 "Anyone" and "a few hours." These are apparently the *Bulletin* qualifications for abuse and slander. An incredible position for a scientific journal. Cf. the similar attempt of Mrs. Gaposchkin (ABS, Sept. 1963, p. 17).

29 R. Juergens checked on Margolis' careful compendium, and reports: "In two brief paragraphs of quotations from *Worlds in Collision*, Margolis deletes five pairs of quotation marks, in effect, attributing words to Velikovsky that are not his; deletes two words, misspells a third, and inserts a questionable synonym for the fourth; he capitalizes four words not so capitalized in the book, and de-capitalizes three others which are capitalized in the book; he ignores Velikovsky's paragraph structure, running parts of two as one; he drops a colon and inserts a period in its stead."

30 Conveys the idea that Margolis did so; but he gives indication only of having read a version in English by Griffith, not the originals or the later French version.

31 False. It is fairly certain on its face that the document tells one story and the events are described as parts of the story: tempest, darkness, Pi-Kharoti, battles of King Tum, the apotheosis in the surges of the whirlpool.

32 Thom=Toum=Tum. It is difficult to believe otherwise. "Les combats du roi Toum en ce lieu" (Goyon, p. 33), "The conflicts of the king Tum" (Griffith).

33 King's battles or advance against the 'evil doers' is in text. Velikovsky interprets the two forces opposing Thom as identical.

34 "Pekharti which Velikovsky alters into Pi-Khiroth." Margolis is unaware that the hieroglyphic text has no vowels, but only consonants; further, he did not read Goyon, because Goyon transcribes Pi-Kharoti. "Pi-ha Hiroth which Velikovsky alters into Pi-ha-Khiroth, further enhancing his evidence." Margolis should know that *het* and *khet* are two different letters in Hebrew (as in Handel and Bach, they are pronounced differently); he argues as if the original text of the Old Testament was written in King James Version. Finally, Velikovsky quoted the King James version as is: "encamping by the sea, beside Pi-ha-hiroth" and added in square brackets [Khiroth]. In a letter to Velikovsky of June 6, 1946, W. F. Albright, eminent Orientalist, expressed himself favorably as to the possible identification of Phrt with Pihairot of Exodus. (Albright was at least then a strong opponent of Velikovsky's chronology). "Ha" is in Hebrew what "the" is in English; Margolis

graph, the story of events as narrated in the *Iliad* and quoted also from other sources, recounts repeated strong perturbations between Mars and Venus, the former being the more disturbed of the two.

20 "That the planets occasionally hop about from one orbit to another" is a misrepresentation of the incidental analogy drawn with Bohr's model. The book (*Worlds in Collision*) argues the planets with intersecting or converging orbits suffered near-collisions with resulting changes in orbits.

21 Velikovsky's opponents, C. Gaposchkin, J. Stewart (*Harper's*, June 1951) insisted that the solar system is electrically and magnetically 'sterile': no electromagnetic fields or forces are present that are able even to a slightest degree to affect the planetary orderly motions. For claiming such fields in the solar system, he was castigated by Mr. Gardner (*In the Name of Science*, p. 33) and placed among believers in a flat earth because he would "belabor the 'orthodox' for refusing to recognize these im-

aginary energies!" In debate with Stewart, he wrote of "the reluctance to recognize the existence of electrical and magnetic forces in the celestial sphere," and Gardner quotes this to make him appear ridiculous. Velikovsky's claim was based upon several indications and speculations:

1. Jupiter sends radio noises. Confirmed 1955.
2. Earth is surrounded by a magnetosphere, Confirmed 1958.
3. Interplanetary space is permeated by a magnetic field. Confirmed 1960.
4. The Sun has an appreciable charge, which, according to V. A. Bailey, gives it a potential of 10 billion volts (1960; *Nature*, March 21, 1964).
5. The rotation of the earth may be disturbed by an electromagnetic field of force. Confirmed, A. Danjon, 1960. The magnetic force (dipole) follows the law of the inverse cube of distance; at close

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the globe, so producing the miracle described in the Book of Joshua. About eight centuries later, a lesser set of catastrophes was produced by the planet Mars, which repeatedly came near the earth and at one point collided with Venus. The result was that both bodies settled down in the orbits in which we know them today. In the process the length of the earth's year was changed from 360 days to the present 365 and a fraction.

There is a great deal more. Velikovsky feels his analysis helps explain an enormous range of things, from such trivialities as why thirteen is considered an unlucky number, to the origin of the species (Darwin was largely wrong) and celestial mechanics (Newton was wrong in important respects). Except in the most general way, Velikovsky offers no explanation of how it is possible that things could happen the way he suggests. His view is that "the solar system is actually built like an atom" and that the planets occasionally hop about from one orbit to another, more or less as electrons were supposed to do in Niels Bohr's conception of the atom. Velikovsky also assumes the existence of massive, and thus far undetectable, electromagnetic forces in the solar system. Velikovsky points out in his preface to *Worlds in Collision*, "no formula and no hieroglyphic will stand in the way of those who set out to read it."

As a consequence, there are limited opportunities for a technical argument with Velikovsky. He describes a theory which does not seem to make sense, and he does not pretend to offer any detailed explanation about how his theories can be made to make sense. For example, it appears to be inherently impossible for Mars to collide with Venus at some point outside the earth's orbit, as Velikovsky proposes, with the consequence that Venus is knocked into a nearly circular orbit well within the earth's orbit, and Mars remains in a nearly circular orbit outside the earth's orbit. This seems to be the case for the same kind of reason that you cannot pour two quarts of water into a one-quart jar; the world, as far as we can tell, simply isn't built that way.

But that the Velikovsky theories seem to make no sense is not necessarily sufficient reason for regarding his

work as hokum. It is at least conceivable, if however remote, that almost everyone is wrong and that Velikovsky is right.

More plausibly, it would be possible that the details of the Velikovsky theories, as he propounded them, are wrong, but that his general insight is sound, and that something like what Velikovsky suggests did happen.

Thus there is no scientific way to examine Velikovsky's conclusions and on that basis prove that his work is worthless. He could be wrong on almost every detail, and still be magnificently right in at least part of his conception. As a result, Velikovsky must be met on his own chosen ground, with an examination of his use of the "accumulated records of human experience." If these do support his theses, then the scientific community is indeed gravely at fault for refusing to look through this telescope. But what Velikovsky says so emphatically is that even if his theories violated none of the presently accepted understandings of how the world works, they would have to be rejected as nonsense anyway; for as anyone who spends a few hours in a library checking Velikovsky's sources will discover, *Worlds in Collision* is, if nothing else, a matchless compendium of how you can prove anything if you are only careless enough. If you wish to find refutation of Velikovsky's arguments, you have merely to look up the sources he cites in his footnotes.

When Velikovsky wishes to provide confirmation that the biblical story of the Exodus is literally accurate, he cites an inscription found on a shrine found at el-Arish, on the border between Palestine and Egypt. He quotes a passage from the inscription describing a period of prolonged darkness and storm, which parallels the biblical account of three days' darkness. He goes on:

"That both sources, the Hebrew and the Egyptian, refer to the same event can be established by another means also. Following the prolonged darkness and the hurricane, the pharaoh, according to the hieroglyphic text of the shrine, pursued the evil-doers in the place called Pi-Khiroti. The same place is mentioned in Exodus 14:9. But the Egyptian pursued them, all the horses and chariots of Pharaoh . . . and overtook them encamping by the

sea, beside Pi-ha-Khiroth. The inscription on the shrine also narrates the death of the pharaoh during this pursuit under exceptional circumstances. Now when the majesty fought with the evil doers in this pool, the place of the whirlpool, the evil doers prevailed not over his majesty. His majesty leaped into the place of the whirlpool. This is the same apothosis described in Exodus 15:19: For the horse of Pharaoh went in with his chariots and his horsemen into the sea, and the Lord brought again the waters upon them."

Velikovsky refers to this evidence again a few pages later: "On the shrine found in el-Arish the story is told of a hurricane and a prolonged darkness when nobody could leave the palace, and of the pursuit by the Pharaoh Taou-Thom of the fleeing slaves who he pursued to Pi-Khiroti, which is the biblical Pi-ha-Khiroth."

Now if you look up the actual inscription, you notice some curious things: for example, the two incidents of the storm and the leap into the whirlpool are not sequential, as Velikovsky presents them. They are described as taking place at widely different places at widely different times with no relation between them, and they involve not the same king, but two different kings, neither of them named Taou-Thom. There is no mention of the pharaoh pursuing the fleeing slaves to Pi-Khiroti, or any other place. In fact, there is no mention of fleeing slaves. But there is mention of a place called Peharti, which Velikovsky alters into Pi-Khiroti, so making it more similar to the place actually mentioned in Exodus, Pi-ha-Khiroth, which Velikovsky has altered into Pi-ha-Khiroth, further enhancing his evidence. But Peharti is not the name of the place near the whirlpool. It is the place where a king (not the king who leaps into the whirlpool) catches and rapes a lady. Furthermore, the king does not leap to his death when he jumps into the whirlpool; rather, to quote from the inscription, "his legs became those of a crocodile, his head that of a hawk with bull horns upon it: he smote the evil doers in the Place of the Whirlpool." In fact, the whole inscription has nothing to do with historical events at all, but is about the mythological god-kings of Egypt, from whom the Pharaohs were to claim descent, and the king who

was against the Ilyksos. Velikovsky identifies the "rebels" or "evil-men" with the Hebrews. One may agree or disagree on the probatory force of his arguments, but certainly they are founded on specific statements of the text. For instance, it is stated that the convulsion which was both a physical disturbance with storms and darkness and a revolution, started when the king employed the Asiatics in construction work: "He had made his hall with the help of evil-men. Evil fell upon the earth."

The fact that there are in the Egyptian text references to the gods does not affect the historical character of other references. Gods and kings are often mixed together in historical passages. It was also a common practice of ancient Oriental historical annals to change defeats into something else. Here too the text seems to explain away a defeat: "When the Majesty of Ra was fighting the enemies in this water of Lake Yat-Desui, the rebels did not reveal a military power against His Majesty. When His Majesty made contact with Lake Yat-Desui, he took the form of a crocodile. . . ."

About 'firstborn' and 'chosen,' a chapter under this name exists in *Ages in Chaos*, pp. 32ff, apparently unknown to Margolis. A fairly strong case is presented. The 'explicit' language of the Bible requires a belief in a miracle (only firstborn killed), so, to explain the factual events behind the story, the chapter in *Ages in Chaos* was written.

Worlds in Collision has *inter alia* this to say on the subject of earthquake as one of the plagues: "To confirm my interpretation of the tenth plague as an earthquake which should be obvious from the expression, 'to smite the houses,' I find a corroborative passage of Artapanus in which he describes the last night before the Exodus, and which is quoted by Eusebius: There were hail and earthquake by night . . . at that time all the houses fell in, and most of the temples.' Also Hieronymus (St. Jerome) wrote in an epistle that 'in the night in which Exodus took place, all the temples of Egypt were destroyed by an earthshock or by the thunderbolt.' Similarly in the Midrashim: . . . 'earthquake, fire, meteorites.'"

Observe the use of the word 'obvious' above and in this passage in quotes by Margolis. Velikovsky does not use the word at all!

All that Velikovsky wrote on this matter was one passage: (p. 171): "The birth of Athene was assigned to the middle of the second millennium. Augustine wrote: 'Minerva [Athene] is reported to have appeared . . . [dots in text] in the time of Ogyges.' This statement is found in the *City of God* (Bk. XVIII, ch. 8), the book containing the quotation from Varro that the planet Venus changed its course and form in the time of Ogyges. Augustine also synchronized Joshua with the time of Minerva activities (*Ibid.*, BK. XVIII, Ch. 12)." It is simply false to say that Velikovsky cited Augustine to show "that Minerva first appeared in the time of Moses."

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Some records quoted are contemporaneous with the events, some of later date, such as the Talmud, Pliny, or Plutarch; this is certainly legitimate; no "neglect" is involved unless the reader is uneducated and must be told in each instance the date of classical writings; even this is often done for lay readers of *Worlds in Collision*.

"The planet would have appeared to grow larger . . . Yet Velikovsky gives no indication that he is surprised that *no one noticed* . . ." (Margolis italics). Everyone noticed; the readers must have noticed; only Margolis did not notice: p. 64, "the last night in Egypt was as bright as the noon on the day of the summer solstice (Zohar II, 38-39)"; p. 77, the same; p. 79, description of Typhon: one of his hands reached out to the west and the other to the east; p. 82, Pliny: fiery appear-

should have known this or, at least, read it in the footnotes of *Worlds in Collision*, or in *Ages in Chaos*.

The notion that the king raped a lady may be appealing to the subconscious of Mr. Margolis, but is not mentioned in either translation of the text. Anyhow the "lady" talked about in the text was the King's mother. (Of course, nothing is impossible.)

It must not be assumed that there is no room for disagreement on the details, or even on the general nature of the text of documents such as this. Nor does Velikovsky's work, dealing as it does with extraordinarily difficult materials, emerge unscathed. Margolis did not detect it, but we noticed, for example, an omission of three dots from Velikovsky's notes on a French hand-written manuscript translating the original carving, which could mean a "She" instead of "It," was meant in one place with a possible facet of doubt

emerging concerning one element of Velikovsky's exegesis.

Margolis gives a preposterous and irrelevant account of the Egyptian text. The text deals with some local events that contributed to the fame of the sanctuary where the inscription was placed. These events were part of a struggle against "rebels" or "evil-men" which was accompanied by terrific physical disturbances. These events were so catastrophic that the story of them took on the style and characters of the standard Egyptian myth of creation. For this reason the events are ascribed to god-kings of the Egyptian myth of creation. In this respect the meaning of the text is evident. The only matter to be subject to interpretation is that of ascertaining which are the historical events that are linked with the myth of creation. The enemies of Egypt are described as Asiatics who lived to the immediate east of Egypt. Goyon suggests that the historical background may be the

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leaps into the whirlpool after his enemies is none other than Ra, the great sun god of Egypt. (The passage immediately following the leap into the whirlpool cited by Velikovsky reads: "Now the majesty of Seb appeared in the seat of the crocodile gods, of Sebek-Ra, of Shu, and of Osiris-Ra, upon the throne of his father Shu asking of gods of men and all flesh, in heaven, earth, and the underworld, water, hills, winds, the ocean and the rocks. . . . Now the majesty of Seb said to the great cycle of nine gods who accompanied him . . ." and so on.) On such evidence, according to the Behavioral Scientist, Velikovsky has thrown the scientific world into "fear and trembling."

It is typical of Velikovsky's scholarship. He wished to prove that the great tenth plague, the slaughter of the firstborn of Egypt, actually described an earthquake caused by the approach of Venus. He theorizes that since the Hebrew words for "firstborn" and "chosen" are similar, there may have been a corruption in the text—the plague was an earthquake, the "chosen" (the aristocracy) of Egypt might have been killed when their fancy stone houses collapsed upon them, while the slaves, living in mud huts, survived. This interpretation, decides Velikovsky, is "obvious," for the bible says that the Lord "smote the houses" of the Egyptians while passing over those of the Hebrews, which clearly implies an earthquake. Velikovsky reached this "obvious" interpretation despite the rather explicit language of the biblical account: "And it came to pass that at midnight the Lord smote all the firstborn in the land of Egypt, from the firstborn of Pharaoh that sat upon his throne unto the firstborn of the captive that was in the dungeon and all the firstborn of cattle."

Even the saints are not preserved against Velikovsky's scholarship. He cites St. Augustine's City of God as authority for his view that Minerva (who Velikovsky says represented the planet Venus) first appeared in the time of Moses. But the passage he cites says the opposite: that Minerva was "far more ancient."

So it goes in the world of Velikovsky scholarship. When he cites records of astronomical observations,

Velikovsky simply ignores anything that conflicts with the interpretation he wishes to put on the records. He has a chapter arguing that before the seventh century B.C. the year was only 360 days long, consisting of twelve lunar months of thirty days each. But he forgets that earlier in the book he himself has quoted records that contradict that claim. His mistranslates passages from foreign authors, and offers the mistranslations as evidence for his theories. He describes records which he claims demonstrate that the appearance of the heavens has changed, but neglects to mention that the records date from periods 500 to 1,000 years after the change purportedly took place.

Velikovsky and his supporters seem to have an exceedingly vague notion of the size of a planet. If, in fact, either Venus or Mars had brushed up against the earth, and it is this supposition that is the heart of Velikovsky's theory, the planet would have appeared to grow larger and larger as day by day it came nearer to earth. Eventually it would appear to dwarf the sun and the moon. Yet Velikovsky gives no indication that he is surprised at the curious fact that no one noticed, that although he can cite all sorts of legends about floods and earthquakes and every sort of catastrophe, he can cite no description linking these events with what clearly would have been the most striking aspect of the encounter—the gradual growth of a speck among the stars until it became so large as to seem to cover the whole sky.

The Behavioral Scientist reports that its articles were read in advance by such well-known scholars as Professor Laswell of Yale, past president of the American Political Science Association; Moses Ildas, Jay Professor of Greek at Columbia; Salvador de Madariaga, of Oxford, and a number of others, all of whom encouraged publication. What is most surprising in this is not that there should be a revival in interest in Velikovsky, for in December 1962 Professors Motz of Columbia and Bargmann of Princeton published a letter in Science, arguing that in fairness to Velikovsky it should be noted that several predictions that he had made have since been confirmed. That alone, as Motz

and Bargmann suggested, provides sufficient grounds for taking a fresh look at Velikovsky, although it does not imply that the fresh look should necessarily reach any kinder judgment than the original. There is no shortage of science fiction writers who can claim to have made some striking predictions, but no one is rushing to proclaim them all "savants of the age."

What is surprising in the Behavioral Scientist report is not that someone should question the outright rejection of Velikovsky, but the tone of the attack: the argument that Velikovsky's critics are driven by irrational "fear and trembling"; the frequently, and sometimes startlingly, distorted summaries of the arguments offered by Velikovsky's critics, and the failure of the report to take notice of any flaws in Velikovsky's scholarship, to even consider the possibility that Velikovsky's work might have merited the ridicule it received. Most surprising of all is the suggestion that social scientists ought to rally to Velikovsky as a man who has demonstrated the power of the "methodology of social science."

Is the Behavioral Scientist seriously arguing that Velikovsky's methodology, of which a small but representative sampling has been presented here, provides grounds for defending Velikovsky?

The pages of the Behavioral Scientist report spill over with anger and passion, and good judgement quickly falls by the way. As noted earlier, it will be useful to keep this incident in mind, for example, the next time we hear questions of why it is that an impartial body of scholars is not set up to provide unbiased factual reports, which will then be universally accepted as the basis for discussion by all parties to political controversy. The problem is not that there are no objective facts, but that it is naive to suppose that on any issue that arouses passions—that is to say, on any significant public issue—scholars will not be found to support both sides. And faced with that choice of expert opinion, it is, of course, not easy for participants in the debate to resist the temptation to believe that the scholar who shares his approach is the man with the objective facts.

archaeological discoveries of current Egyptian objects in Greek ("later") diggings, are some of Velikovsky's wild guesses."

48 Since this is the third reference to a phrase that occurred [once] in L. Stecchini's article, Margolis should be informed that Kierkegaard's use of the phrase did not involve people literally going about shaking like aspen leaves. Kierkegaard meant man's Fear in relation to the Cosmos.

49 Example? A single case, at least?

50 But cf. ABS p. 67, "While his ideas are not at all beyond criticism. . . ."

51 Inaccurate quote. Certainly, however, Velikovsky has shown what remarkable resources still exist in ancient materials.

52 Next Margolis will be an expert on sampling!

"The small but representative sampling" actually consists of criticism of two points out of four extensive volumes of published writings. In one, which deals with an Egyptian inscription, Margolis flunks in Egyptology and linguistics. In the other, which refers to Augustine, he fatally misquotes both Augustine and Velikovsky.

53 The grounds are very clearly stated, if Margolis will read them. Velikovsky deserves defense primarily as a serious scholar attempting to place his work before a scientific public without censorship, personal abuse, slander, and ostracism. NOWHERE DOES MARGOLIS TAKE UP THE GRAVE ISSUE OF VIOLATION OF A MAN'S PERSONAL LIBERTY AND CENSORSHIP BY A BODY OF OPONENTS, NOR DOES HE TREAT THE SECOND MAIN EFFORT OF THE ABS ARTICLES: THEIR PROPOSITIONS ABOUT THE SOCIOLOGY OF SCIENCE.

54 Alas, the double-talk begins again.

Six careful readings of this paragraph leave us baffled and bemused. Perhaps our readers can make sense of it.

A. de G.

ance . . . twisted like a coil and it was very grim to behold . . . a ball of fire.; p. 83, "in the shape of a globe and was of terrible aspect" (from Roekenback, 1602); pp. 83-84, Lydus, Servius, Hephestion, Junctinus mention the Typhon comet: it is depicted as an "immense globe" (*globus immodicus*). Even in the subsequent centuries: p. 164, Chaldeans: Venus—"bright torch of heaven" that "illuminates like the sun." "A stupendous prodigy in the sky."; p. 165, Chinese: "Venus . . . rivaled the sun in brightness."; p. 165, Hebrews: "The brilliant light of Venus blazes from one end of the cosmos to the other end." Many more quotes could be extracted from *Worlds in Collision*.

46 This perennial surprise of Margolis is a

trite device of transition (cf. above paragraph 3, and next paragraph below) that unfortunately leaves whole ideas introduced and dangling. What is surprising in this?

47 There is a shortage of good wild-guessers. The *Encyclopedia Americana* cites as a most striking prediction J. Swift's prediction of two satellites of Mars (1726), actually discovered by A. Hall in 1877; but who is to say? In the time of Swift, one year before Newton's death, there were known to be five satellites of Saturn, four of Jupiter, one of Earth, two (imaginary) of Venus. A lucky guess of Mars' satellites is conceivable. Predicting radio noises of Jupiter, or the great heat of Venus (claiming, against the calculated value of 17°C, a state close to incandescence), or

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The Reform of Publishing

(AN EDITORIAL)

From beginning to end, publishing today is miserably astraddle medievalism and commercialism. Its rationale and organization are obstacles to research and scholarship.

In a quip that few bothered to understand, Robert M. Hutchins once said that we should give the college diploma to anyone who applied and paid a fee. We are reminded of this when we consider the problems of "scholarly" publication. Since today almost anyone can publish his ideas, and often the quality of the work is inversely proportional to its easy publishability, we must also say: "We should publish anything a scholar wants to publish, no questions asked." Let any social scientist who has the nerve to write be assured that his writing will be available to those who might be interested in his ideas. Let him bear the praise or blame, as he will in any case.

There would be no waiting while overworked editors read a study and arrive at a questionable decision about it, no need to pretend that many of the heavy costs of publishing are more than a waste, no reworking of a piece to satisfy the eccentricities of a succession of journals and publishers. We venture to say that no decline in the quality of writing overall would be apparent, and only a moderate increase in quantity. (Consider that currently much bad writing is done to persuade academic superiors of a person's merit. If *anyone* could be published, this spurious activity might diminish.)

Suppose the several journals that form the bulk of a discipline's publishing joined their resources, and set up an inexpensive format, in loose-leaf, with standard type-faces and sizes. Counting on a continuous flow of manuscript, a most efficient printing operation could be set up. Whatever manuscript came in would be printed, if its author said it was ready to go. Books and monographs could be handled in the same way. Can anyone familiar with printing and publishing doubt that this complete enterprise would involve less cost than present professional publishing? Are not the present expensively bound, miscellaneous collections of studies an anachronism and an enemy of orderly research?

How should we account for differing demands? First by permitting each author of the group only a certain number of copies free. He might either designate the recipients or instruct the center to fill all requests until his quota was exhausted. Meanwhile, all members of the group would check on a monthly list the items they wanted until a yearly quota was exhausted, after which they would pay for items. No longer would they perforce collect pounds of useless material for every ounce they used. The author could also pay for extra copies, as he does now.

For those who wished a more exotic garb for their work, a central service would reproduce and send any member's work to a list of journals and publishers simultaneously. The first offer received by the author, returned on a standard form accompanying the manuscript, would be accepted. This method would both save the author's energies and time, and hasten publication. Opposition would come from author's agents and publishers, both of whom like to have sole option on a work. However, particularly for scientific writing, their policy is against the author's best interests.

Those not liking either plan may be consoled with the thought that an author would not be bound to the plans and could use traditional channels. Nevertheless, the impact of the two phases of the new plan would be likely to break up many frustrations that serious authors today encounter in persuading others to publish their work, in getting their ideas to the few who might use them, in preserving their time, energy, and money for their principal *raison d'être*—scholarship—, and in cataloging and using the large variety of published materials.